UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/922,464	08/03/2001	Hans Poisel	ZTP 99 P 3043	7196

24131 7590 03/30/2004

LERNER AND GREENBERG, PA
P O BOX 2480
HOLLYWOOD, FL 33022-2480

EXAMINER	
LUU, THANH X	

ART UNIT	PAPER NUMBER
2878	

DATE MAILED: 03/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/922,464	POISEL ET AL.	
	Examiner	Art Unit	
	Thanh X Luu	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,12-15 and 17-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,12-15 and 17-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 29, 2004 has been entered.

Claims 1-10, 12-15 and 17-30 are currently pending.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 29 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 29 and 30, "said deposit control device" lacks proper antecedent basis.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 4-6, 15, 18, 20-23, 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lahrmann et al. (U.S. Patent 6,035,471) in view of Applicant's admitted prior art (see page 3, lines 11-18), hereinafter, AAPA.

Regarding claims 1, 15, 18, 20-23 and 25-28, Lahrmann et al. disclose (see the Figure) a device for controlling deposits on surfaces, comprising: at least one body (4) having a surface on which deposits occur and influence reflection properties of the surface to electromagnetic radiation; at least one transmitter (2) for transmitting electromagnetic radiation to the at least one body, the transmitter being connected to the at least one body; at least one detector (3) for detecting a presence of the deposits at the surface (see column 3, lines 60-68), the detector being connected to the at least one body and measuring electromagnetic radiation received from the transmitter after reflection at the surface, the detector generating signals based upon the presence of deposits detected at the surface. In addition Lahrmann et al. disclose (see the Figure) a connecting piece (1) and a sensor part having the at least one body and being detachably connected to the connecting piece and the body has a central axis (in and out of the paper) and the transmitter introducing radiation at an inclined angle with respect to the central axis. Lahrmann et al. also disclose (see column 4, lines 5-10) using descaling means to reduce deposits in home appliances. Lahrmann et al. do not specifically disclose an ion exchanger for controlling the deposits. AAPA teach that ion exchangers are common in home appliances to control deposits. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made

to provide an ion exchanger in the apparatus of Lahrmann et al. in view of AAPA to effectively reduce deposits and improve the operation of home appliances.

Regarding claims 29 and 30, Lahrmann et al. further disclose (see column 4, lines 4-5) drawing the attention of the user to the detected state. Lahrmann et al. do not specifically disclose a visual or acoustic alarm. However, visual or acoustic alarms are notoriously well known in the art to effectively alert a user. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide such types of alarms in the apparatus of Lahrmann et al. in view of AAPA to effectively alert a user as desired.

Regarding claims 4 and 5, Lahrmann et al. in view of AAPA disclose the claimed invention as set forth above. Lahrmann et al. and AAPA do not specifically disclose the at least one transmitter emitting radiation at a predetermined wavelength dependent on a degree of change by the deposits based on a maximum degree of change. However, it is notoriously well known in the art to choose an optimum wavelength for detection or a wavelength that provides a maximum degree of change in order to provide better detection. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a specific wavelength that optimally detects the deposits in the apparatus of Lahrmann et al. in view of AAPA to reduce interference and provide better detection.

Regarding claim 6, Lahrmann et al. in view of AAPA disclose the claimed invention as set forth above. Lahrmann et al. in view of AAPA do not specifically disclose two detectors as claimed. However, it is well known in the art to provide

additional detectors to improve the accuracy of detection. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide addition detectors as claimed in the apparatus of Lahrmann et al. in view of AAPA to provide better and more accurate detection.

6. Claims 2, 3, 12-14, 17, 19 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lahrmann et al. in view of AAPA, and further in view of Seiler et al. (U.S. Patent 5,804,817).

Regarding claims 2, 3, 12-14, 17, 19 and 24, Lahrmann et al. in view of AAPA disclose the claimed invention as set forth above. Lahrmann et al. do not specifically disclose a reflection type deposit detector as claimed. Seiler et al. teach (see Figure 1) a deposit (contamination) detector using internal reflection. Thus, Seiler et al. recognize that deposit detection using the principle of internal reflection is just as effective. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the configuration of Seiler et al. in the apparatus of Lahrmann et al. in view of AAPA to obtain a more compact configuration.

7. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lahrmann et al. in view of AAPA, and further in view of Nelson (U.S. Patent 6,232,603).

Regarding claims 8 and 9, Lahrmann et al. in view of AAPA disclosed the claimed invention as set forth above. Lahrmann et al. and AAPA do not specifically disclose the configuration as claimed. Nelson teaches (see Figure 3) the at least one body has a point at which electromagnetic radiation is introduced at the at least one body and another point at which the electromagnetic radiation reaches the at least one

detector, the point and the other point are adjacent to one another. Nelson further teaches (see Figure 4) the at least one body has a silvered surface (32) for reflecting the electromagnetic radiation and an inside; and the silvered surface is directed toward the inside of the at least one body and substantially reflects the electromagnetic radiation for guiding the electromagnetic radiation to the at least one detector. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the configuration of Nelson in the apparatus of Lahrmann et al. in view of AAPA to obtain a more compact configuration.

8. Claims 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lahrmann et al. in view of AAPA, and further in view of Coulling et al. (U.S. Patent 6,084,519).

Regarding claims 7 and 10, Lahrmann et al. in view of AAPA disclosed the claimed invention as set forth above. Lahrmann et al. and AAPA do not specifically disclose the configuration as claimed. Coulling et al. teach (see Figure 13) the at least one transmitter is two transmitters disposed with respect to the at least one detector to create paths of the electromagnetic radiation from the two transmitters to the at least one detector having different lengths inside the at least one body. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the configuration of Coulling et al. in the apparatus of Lahrmann et al. in view of AAPA to obtain a wider area of detection and improve the accuracy of detection.

Response to Arguments

9. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh X Luu whose telephone number is (571) 272-2441. The examiner can normally be reached on M-F (6:30-4:00) First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thanh X Luu
Primary Examiner
Art Unit 2878

03/04